What is claimed is:

1. A method of manufacturing a structural fiber reinforced porous ceramic matrix composite member having a predetermined pattern of cooling holes and channels therein, the cooling holes and channels formed by a process comprising the steps of:

providing at least one ply of ceramic fiber material;

stitching at least one fugitive thread through the at least one ply of ceramic fiber material in at least one preselected pattern;

infiltrating the ceramic fiber material with a ceramic slurry;

consolidating the infiltrated ceramic fiber material; and

sintering the laminated and infiltrated ceramic fiber material at a temperature sufficient to decompose the at least one fugitive thread but not sufficient to damage the ceramic fiber material, leaving at least one hole and at least one channel in the ceramic matrix composite component member in place of the at least one fugitive thread.

2. The method of claim 1, wherein the ceramic fiber material is selected from the group consisting of ceramic paper, ceramic cloth, and ceramic felt.

3. The method of claim 2, wherein the fugitive thread is comprised of a material selected from the group consisting of nylon, polyester, rayon, or cotton, or carbon fiber.

4. The method of claim 3, further comprising of the step of inking the predetermined pattern on at least one a ply prior to the step of stitching.

5. The method of claim 4, wherein the step of infiltrating the ceramic fiber material is performed prior to the step of stitching at least one fugitive thread through the at least one ply of ceramic fiber material in a preselected pattern.

6. The method of claim 4, wherein the at least one ply of ceramic material is comprised of a plurality of stacked plies.

7. The method of claim 6, further comprising the step of combining a plurality of stitched plies having similar stitching patterns and offsetting the stitched plies from each other prior to performing the step of consolidating.

8. The method of claim 6, further comprised of the step of combining a plurality of stitched plies having different stitching patterns prior to performing the step of consolidating.

9. The method of claim 6, wherein the step of consolidating is performed at a preselected pressure of at least 200 psi and a temperature of at least 300°F.

10. The method of claim 6, wherein the step of sintering is performed at a preselected temperature in the range of between about 1100°F to about 2100°F.

11. The method of claim 1, wherein the holes have an average diameter in the range of about .003 inches to about .020 inches.

12. The method of claim 1, wherein the resulting composite matrix composite member has an air flow rate of about 7×10^{-4} pps/in^2 (at a constant pressure ratio of 1.2 P/Patm).

13. A structural fiber reinforced ceramic matrix composite member having a preselected pattern of cooling holes and channels therein, the cooling holes and channels formed by a process comprising the steps of:

providing at least one ply of ceramic fiber material;

stitching at least one fugitive thread through the at least one ply of ceramic fiber material in a preselected pattern;

infiltrating the ceramic fiber material with a ceramic slurry;

consolidating the infiltrated ceramic fiber material; and

sintering the infiltrated and consolidated ceramic fiber material at a temperature sufficient to decompose the at least one fugitive thread bust not sufficient to damage the ceramic fiber material, leaving at least one hole and at least one channel in the ceramic matrix composite component member in place of the at least one fugitive thread.

14. The ceramic matrix composite member of claim 13, wherein the ceramic fiber material is selected from the group consisting of ceramic paper, ceramic cloth, or ceramic felt.

15. The ceramic matrix composite member of claim 14, wherein the fugitive thread is selected from the group consisting of nylon, polyester, rayon, or cotton, or carbon.

16. The ceramic matrix composite member of claim 15, further comprising the step of inking the preselected pattern on at least one ply prior to the step of stitching.

17. The ceramic matrix composite member of claim 15, wherein the step of infiltrating the ceramic fiber material is performed prior to the step of stitching at least one fugitive thread through the at least one ply of ceramic fiber material in a preselected pattern

18. The ceramic matrix composite member of claim 15, wherein the at least one ply of ceramic material is comprised of a plurality of stacked plies.

19. The ceramic matrix composite member of claim 15, further comprising a step of combining a plurality of stitched plies having similar stitching patterns and offsetting the stitched plies prior to performing the step of consolidating.

20. The ceramic matrix composite member of claim 15, further comprising the step of combining a plurality of stitched plies having different stitching patterns prior to performing the step of consolidating.

21. The ceramic matrix composite member of claim 15, wherein the step of consolidating is performed at a preselected pressure of at least 200 psi and a preselected temperature of at least 300°F.

22. The ceramic matrix composite member of claim 15, wherein the step of sintering is performed at a preselected temperature in the range of about 1100°F to about 2100°F.

23. The ceramic matrix composite member of claim 15, wherein the at lest one hole and at least one channel have an average diameter in the range of about .003 inches and about .020 inches.

24. The ceramic matrix composite member of claim 15, wherein the resulting composite matrix composite member has an air flow rate of at least about 7×10^{-4} pps/in^2 at a constant pressure ratio of 1.2 P/Patm.